

CONSERVATION OF ENDANGERED, THREATENED AND NONGAME BIRDS
PERFORMANCE REPORT, 1 July 1989 to 30 June 1990

by Sumner W. Matteson and Charlene M. Gieck

SUMMARY

The Wisconsin Department of Natural Resources continued the endangered, threatened, and nongame birds conservation program.

No new recovery plans were written during this time period.

Inventories to document statewide population levels and identify critical habitats have been conducted for: red-necked grebe, great egret, Cooper's hawk, red-shouldered hawk, osprey, prairie chicken, piping plover, common tern, Forster's tern, caspian tern, common barn-owl, and loggerhead shrike.

Monitoring systems to follow population trends and habitat use for key areas were developed and incorporated into the recovery plans.

A total of 241 artificial nesting platforms were installed on 3 lakes in east-central Wisconsin. Approximately 176 platforms were occupied by Forster's terns during the 1990 field season. There were no new barn-owl nest boxes put up in 1989. Of the 100 existing boxes, none were observed to be utilized by barn-owls.

Vegetation management and secure nesting sites were established for common terns. No piping plovers nested in Wisconsin in 1990.

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Study 215: CONSERVATION OF ENDANGERED, THREATENED, AND NONGAME
BIRDS

PERFORMANCE REPORT
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JOB 215.1: RECOVERY PLANNING

No funds were allocated for this job. Recovery plans have been completed for bald eagle, osprey, peregrine falcon, common tern, Forster's tern, common barn-owl, trumpeter swan, loggerhead shrike, and red-necked grebe.

JOB 215.2: STATEWIDE INVENTORY

Red-necked Grebe (threatened)

Rush Lake (Winnebago County) - Tom Ziebell (pers. comm.) observed 58 individuals and found 9 nests on 25 June. Not all of Rush Lake was surveyed, however, and Ziebell speculated that there could have been as many as 70 individuals on the lake.

Hanten Pond (St. Croix County) - No nesting has occurred here since 1988. The area was nearly dry in 1990 (Bruce Bacon pers. comm.).

Bierbrauer Lake (St. Croix County) - A pair of grebes was seen at this site early in the year. They were gone by June. Very little nesting material is available at this site (Bruce Bacon pers. comm.).

Oakridge Lake (St. Croix County) - In 1990 one pair attempted to nest. The first nest, containing 6 eggs, was destroyed in a storm. A second nest was built but the outcome is unknown. No young were seen at this site.

Grassy Lake (Columbia County) - As in spring 1989, Sumner

Matteson (pers. obs.) observed a single adult here in April 1990. No other adults, however, were observed here and nesting did not occur. Low water levels were again evident during the reporting period.

Harvey and County DM Pond (Dane County) - In 1988 a pair produced 2 young, but no birds have been seen here since. Low water levels may have discouraged birds from nesting (Sumner Matteson pers. obs.).

Great Egret (threatened)

Four-mile Island (Dodge County)

The midwinter survey of the egret colony site conducted in December 1989 revealed that 108 pairs of Great Egrets had nested on the island during the previous summer (Brian Dewey pers. comm.). A count of young at 15 nests produced a mean of 1.13 young/nest on 21 June 1990 (Brian Dewey pers. comm.)

Nelson-Trevino, St. Mary's Bottoms, and Whittman's Bottoms

No surveys were conducted at these colonies in 1990.

Dago Slough, Ambrough Slough, and Lansing Dike (Grant and Crawford counties) - These are surveyed by the USFWS refuge managers. The surveys are conducted every other year - no surveys were conducted in 1990 (John Lyons pers. comm.).

Embarrass River Bottoms

No surveys were conducted for this area in 1990. An effort is being made to purchase the rookery.

Black Brook

A single egret was seen near the Cylon Wildlife Area (Kris Belling pers. comm.). Last year 6 pairs were found in a great blue heron rookery.

Cooper's Hawk (delisted 9/89)

The Cooper's Hawk was formerly listed as a threatened species in Wisconsin. After a review of its status and distribution, it was delisted in September 1989.

Robert Rosenfield and John Bielefeldt continued their field work on the breeding ecology of Cooper's Hawks in Wisconsin; 1990 marked the eleventh year of their research. They located 34 nests; 26 of 29 (90%) nests produced young to a bandable age. In total, 99 young were banded at 26 nest sites (3.8 young/nest). A mean of 4.7 eggs/nest was documented. Two nests had 6 eggs each, the largest clutch sizes in the study's history.

A total of 43 adults were identified in 1990. Six were identified by distinct color bands; 37 were trapped. Of the 37, 16 were returns from previous years and 2 were "dispersal" birds, including an eight plus year-old female and a seven plus year-old male.

Since 1980, a total of 850 young have been banded (Robert Rosenfield pers. comm.).

Red-shouldered Hawk (threatened)

John Jacobs (pers. comm.) continued his Red-shouldered Hawk study in northeastern Wisconsin. Jacobs checked 73 locations for evidence of nesting in 1990. A total of 41 active territories were found on county forest and public lands. Of the 41 active territories, 20 nests successfully produced 40 young (0.98 young/active territory). This is a nest success rate of 49% which almost equals Jacobs' 20 year average of 50% during the course of his research with this species..

Jacobs felt that raccoon predation may be responsible for the loss of eggs and young. Fishers have also been important predators. Several incubating adult females have been killed, probably captured by fishers at night. Tom Erdman (pers. comm.) reported that fishers have been responsible for the deaths of at least 2 adult Redshoulders and 3 Northern Goshawks at sites in northeastern Wisconsin. Erdman believes that fishers are taking eggs and young at nests in Forest, Florence, Marinette, and Oconto counties.

Most (99%) nests were located in hardwoods; 2 were in dead conifers.

The most significant recovery problem still facing the Red-shouldered Hawk is habitat loss. Jacobs feels that not enough mature forests are available to nesting birds and that existing tracts are not large enough.

Osprey (threatened)

After the recovery objective of 300 active territories was reached in 1989, the state status of the Osprey changed from endangered to threatened.

Aerial surveys revealed 310 active territories in 1990. Despite the absence of surveys in the state's southern district in 1990, the number of active territories continued to increase. Since 1976, the number of active territories has increased annually from 106 to the present high of 310. In 1989, there were 300 active territories and 333 young produced.

An aerial survey to determine productivity did not occur in 1990. The next productivity check will be in 1994.

Bald Eagle (threatened)

The state status of the Bald Eagle was reviewed and changed from endangered to threatened in fall 1989. In 1990 aerial surveys documented 362 active territories.

WDNR joined the Minnesota DNR, the University of Michigan, Minnesota Pollution Control, and the USFWS to monitor contaminants in Bald Eagles along waterways with fish advisories.

The Adopt An Eagle Nest Program has continued to support the eagle survey as well as management activities. An activity/information booklet was created for this year's participants. A copy is attached.

A management guide for private landowners was also developed. It is in production and copies shall be mailed in September.

Prairie Chicken (threatened)

The WDNR Bureau of Wildlife Management and the University of Wisconsin-Stevens Point continued to conduct the annual statewide census of booming grounds. The total number of Prairie Chicken cocks on booming grounds in 5 management areas in central Wisconsin was 535 in 1989:

	<u>1989</u>	<u>1990</u> (preliminary results)
Buena Vista Marsh	182	274
Leola Marsh	64	80
Paul Olson	124	110
Mead Wildlife Area	127	*
McMillan Wildlife Area	38	*

* information not available yet

Piping Plover (endangered)

No nesting occurred in 1990 anywhere along the Wisconsin shores of Lakes Michigan and Superior, although available habitat is abundant on Long Island and Chequamegon Point on Lake Superior. Eric Epstein (pers. comm.) observed a pair of migrants on northeastern Chequamegon Point in mid-May and Sumner Matteson (pers. obs.) observed a lone adult approximately 400 m to the south of Epstein's observation in early June. No other Piping Plovers occurred along the Wisconsin shores of Lakes Michigan and Superior.

Common Tern (endangered)

The total number of breeding pairs at 5 colony sites increased 5% in 1990 to 395, but this was a poor year for production. Despite the overall increase statewide, the number of nesting pairs at the state's only stable colony site, the Ashland Pier (Tern Island), declined 27% from 176 pairs in 1989 to 129 pairs (William Penning pers. comm.). This colony produced 90 young (.70 young/pair) but hatched out 322 young. Many chicks died suddenly from a cause as yet undetermined; several dead chicks were collected for analysis.

The best productivity occurred at Interstate Island in the Duluth-Superior Harbor where 124 pairs nested, 286 chicks hatched out, and 168 young fledged (1.35 young/pair) (William Penning pers. comm.). At Kidney Island in lower Green Bay, a total of about 125 nesting pairs were recorded by Thomas Erdman (pers. comm.). On 22 June, 5 inches of rain fell in the Green Bay area. The tern colony was virtually washed out. From 20 individually fenced nests only 3 young fledged. Overall, only about 25 young (0.2 young/pair) fledged at the colony site (Thomas Erdman pers. comm.).

On Bare Island (White's Island) on Lake Butte des Morts, there were an estimated 10 breeding pairs (Sumner Matteson and Jeff Pritzl, pers. obs.). The colony here has declined 50% since 1989. Dense herbaceous and woody vegetation may be largely responsible for the decline. This site needs vegetation management. It is unknown how many chicks survived to fledging. At Willow Tree Island on Lake Winnebago there were an estimated 7 breeding pairs and at least 3 chicks that likely fledged (Sumner Matteson pers. obs.). This site also needs vegetation management; control of herbaceous vegetation will be essential if terns are to have any chance at establishing productive colonies at either of these latter sites.

The Common Tern colony locations and number of young produced in 1990:

Ashland Pier, Lake Superior (Ashland County) - 129 pairs; 90 young fledged.

Kidney Island, Green Bay (Brown County) - ca. 125 pairs; ca. 25 young fledged.

Interstate Island (Douglas County) - 124 pairs; 168 young fledged.

Bare Island, Lake Butte des Morts (Winnebago County) - 10 pairs; unknown number fledged.

Willow Tree island, Lake Winnebago (Fond du Lac County) - 7 pairs nested; at least 3 young fledged.

Forster's Tern (endangered)

There were 8 colony locations in 1990; 1 fewer than in 1989 and 4 fewer than in 1988.

The total number of breeding pairs increased 19% in 1990 from 837 to 996, with about 73% of the breeding pairs occurring on Kidney Island. The number of nesting pairs on the island increased dramatically (89%) from 385 in 1989 to 729 (Thomas Erdman pers. comm.). Most likely these breeding birds are immigrants since nesting success has traditionally been poor on the island. There were 4 subcolonies on the on the dredge spoil island's north end and researcher Thomas Erdman fence-enclosed a total of 20 individual nests. These nests experienced ca. 92% hatching success and 2 young fledged per enclosure. Erdman (pers. comm.) estimated that overall only about 130-150 young fledged at the colony because most young fell into wide dredge spoil cracks in the substrate and died.

On Lakes Poygan and Winneconne in Winnebago County there were a total of 160 nests on artificial nesting platforms and 46 nests on natural substrates, most on phragmites mats. Only 3 fledged young from 113 nests were observed by Jeff Pritzl (pers. obs.) on Lake Poygan. Most chicks disappeared without a trace. Pritzl witnessed the disappearance of 5 chicks pulled underwater, possibly by northern pike. All 46 "natural" nests were destroyed by storms in June (Jeff Pritzl pers. comm.). At colony CP2 on Lake Winneconne, only about half of the platforms were occupied and only 1 chick was observed.

On Lake Puckaway in Green Lake County there were 2 platform colonies: 1 in a cattail stand--10 of 11 platforms used; and 1 in a phragmites stand, with only 6 of 18 platforms used. No platform was successful; the cause of nesting failures is unknown.

At Rush Lake in Winnebago County Tom Ziebell (pers. comm.) counted 116 adults and found 39 active nests, mostly on floating residual Scirpus at 5-6 different locations. He counted, however, only 3 fledged young and found these only in 1 area on the lake. Many nests were washed out by heavy rains.

At the Trempealeau National Wildlife Refuge a total of 6 nesting pairs was documented (Ray Faber pers. comm.).

No nesting terns were observed at Big Muskego Lake in Waukesha County nor at Grand River Marsh in Green Lake County.

The distribution of colonies, number of nesting pairs, and young production (if known) are presented below:

Kidney Island (Brown County) - 729 pairs; 130-150 fledged young.

Lake Poygan (Winnebago County; platform sites "E" and "W") - 113

pairs (colonies of 86 and 27 pairs, respectively) on artificial nesting platforms; 46 pairs on natural substrates, largely phragmites mats. Only 3 young known to have fledged.

Lake Winneconne (Winnebago County; Clark's Point--CP2) - ca. 47 pairs; 1 young observed.

Rush Lake (Winnebago County) - 39 pairs; 3 fledged young.

Lake Puckaway (Green Lake County) - 16 pairs; no production.

Trempealeau National Wildlife Refuge - 6 pairs; production unknown.

Caspian Tern (endangered)

The Caspian Tern was added to the state's list of endangered birds in the fall of 1989. No nesting attempts occurred during the reporting period at Renard Isle (Kidney Island), site of a colony in 1988 and 1989. The species occurs regularly during summer months along the Wisconsin shores of Lakes Michigan and Superior.

Common Barn-owl (endangered)

No nesting was known to have occurred in Wisconsin during the reporting period. There were only 2 reported sightings.

Loggerhead Shrike (endangered)

Volunteers were not used for a statewide search for loggerhead shrikes in 1990. However, Marilyn Ward, a 1989 volunteer, did locate one of two new nest sites in 1990.

Bruce Bacon (in litt. to Mike Mossman) reported that a total of 10 sites were checked. Five nests were found. Four produced young; one nest was disturbed by predation. Thirteen young were banded at 3 nests. Two additional young were seen at the fourth nest but the young had already fledged.

JOB 215.3: DETERMINATION OF MONITORING SYSTEMS

Objective

Develop a system for monitoring key areas to follow population trends of, and habitat use by, endangered and threatened birds.

Findings

Systems for monitoring population trends and habitat use are incorporated into the recovery plans for endangered and threatened birds.

The longterm monitoring system established at Rush Lake (Winnebago County), which includes permanent transects, continues to provide information on many nongame species.

Data continue to be collected for the establishment of a Wisconsin colonial waterbird registry that will enable managers and planners to analyze population trends, identify critical habitats, and determine if a species requires listing as state endangered or threatened.

Winter nest surveys and productivity assessments continued in the Horicon Marsh area to determine the status of Great Egrets, Double-crested Cormorants, and heron species.

JOB 215.4: HABITAT MANAGEMENT FOR FORSTER'S TERN
AND COMMON BARN-OWL

Objective

Provide secure nesting sites for Forster's Terns and Common Barn-owls through the installation of artificial nest structures.

Findings

Forster's Tern

A total of 241 artificial nesting platforms were installed on 3 lakes in east-central Wisconsin. A total of approximately 176 platforms were occupied by Forster's Terns during the 1990 field season. Locations of platforms were:

Lake Poygan (Winnebago County) - 117 platforms installed; 113 occupied.

Lake Winneconne (Winnebago County) - 95 platforms installed; about half of these were occupied.

Lake Puckaway (Green Lake County) - 29 platforms installed; 17 platforms occupied.

Common Barn-owl

No new nest boxes were installed during the reporting period. Over 100 boxes were monitored for nesting activity.

JOB 215.5: HABITAT MANAGEMENT FOR COMMON TERN AND
PIPING PLOVER

Objective

Provide secure colony sites for the Common Tern and nesting

habitat for the Piping Plover.

Findings

Common Tern

As part of continuing control of the growth of smartweed at Kidney Island in southern Green Bay, a pre-emergent herbicide, Princep, was used on 24 May at the northern end of the island. This was preceded by the use of fire rakes and a brush saw, then a rototiller to clear the perimeter of the island for fence lines. The post-emergent herbicide, Round-Up, was used on 6 separate occasions between the third week of May and mid-July to maintain fence lines and to create small openings where the terns nested. Approximately 4 acres were fenced to segregate a Ring-billed Gull colony from the nesting terns, which colonized one area. Newly created open areas were utilized immediately by the terns, according to WDNR wildlife manager Tom Bahti.

The outside perimeter of the Common Tern colony at Ashland was fenced, as in past years, to prevent young from escaping and becoming lost and to facilitate counts of chicks.

Piping Plover

No active management occurred during the reporting period.

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